

Diabetes Prediction with Logistic Regression

Importing required libraries

import pandas as pd

from sklearn.model_selection import train_test_split

from sklearn.linear_model import LogisticRegression

from sklearn.metrics import accuracy_score

Load dataset (Pima Indians Diabetes dataset)

url = "https://raw.githubusercontent.com/jbrownlee/Datasets/master/pima-indians-diabetes.data.csv"

columns = ['Pregnancies', 'Glucose', 'BloodPressure', 'SkinThickness', 'Insulin',
 'BMI', 'DiabetesPedigreeFunction', 'Age', 'Outcome']

df = pd.read_csv(url, names=columns)

Split data into features and target

X = df.drop('Outcome', axis=1)

y = df['Outcome']

Split into training and testing data

X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)

Create and train the model

model = LogisticRegression(max_iter=200)

model.fit(X_train, y_train)

Make predictions

y_pred = model.predict(X_test)

Evaluate the model

accuracy = accuracy_score(y_test, y_pred)

print(f"Accuracy: {accuracy * 100:.2f}%")

This code uses logistic regression to classify whether a patient has diabetes based on several health metrics.